CHANGES IN MANIFESTATION OF PRENATALY ACQUIRED LESIONS

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A changing panorama in manifestation of cerebral lesions is obvious. H a g b e r g (4,5,6,7) reported changes in Sweden, overseeing a population of 1.8 millions of inhabitants.
A significant decrease in cerebral palsy has occured in Sweden, concerning a decrease of peri- or neonataly acquired forms of cerebral palsy.
Hagberg also stated"that the very active efforts to prevent brain damage has given more profit in the form of undamaged babies than losses in the form of surviving severly disabled children who would have died with the less active approach of earlier years".

If we state that almost the same incidence happened in Germany, we have to find out if the babies are really less damaged or not damaged. Unfortunately we miss exact datas, but there might be a tendancy to have less babies with cerebral palsy.
As published by H a g b e r g (8), L u n d b e r g (12), H a i d v o g e l (9) and other authors, and more and more observed in out institute, different kinds of syndromes are to be seen and to which I want to focus the attention.

These children show a dissociated motor development with more or less severe involvement of developmental disorders. The clinical characteristics show in most of the cases muscular hypotonia. The joints are hyperextended, the lower part of the body is often more involved than the upper part. Motor development is delayed, but in some children the prognosis is good, even if delayed.
The delay is due to the instability of the joints, especially of the hip, knees and the ankle-joints. Plano-valgus feet with good arch is to be seen. The feet look babylike with round contours and thick fat layer.
When the foot-skin is stimulated by pinching there is sometimes no reaction at an age, when reactions on tactile stimulation should be relatively good and normal.
The skin of those children is often unsensitive or the children show skin problems like dermographism and/or eczema. They have eating- and later speech-problems. Often they have sleeping difficulties. They like(as often reported by the mothers) to be caressed more than normal children. And they have behavioural problems like hyperactivity, adynamy and frequent temper tantrums.

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In a later age they have problems of motor-coordination and balance.
When they are hyperkinetic they can be tranquilized by rocking and swinging.
In a few cases we have observed a characteristic behaviour of hyperexitability, hyperkinesy, day and night-crying babies, not eating normally and having misfeelings in being dressed and undressed. The face looks unhappy and the moster-child interaction seems to be disturbed. The skin of those children is oversensitive, they show muscular hypertonia, but no signs for spasticity. They do not like to be caressed. This behaviour sometimes simulates cerebral palsy.

One can assume that those children have vestibulare and tactile-kinesthetic disorders. In doing adaquate treatment, those abnormal signs decrease or sometimes disappear.

The motor disorder is a socalled afferent motor-perceptual disorder and can be neurophysiologically explained. I want to remind that skin and brain are of ectodermal origin. This perceptual disorder can be part of a higher desintegrating perceptual disorder with accustic and visuel perceptual difficulties and perceptual-integration problems. It can lead to a totally chaotic reacting child, simulating mental handicap with obvious behavioural problems and motor handicap.

I want to report a follow-up study in 133 children, who are now 6 years old.
These children have been referred
1. by institutions for normal babies, because the mothers wanted a developmental examination
2. by doctors, because the babies showed some developmental deviations
3. by a clinic(premature and neonatal ward)with the special question of early detection of developmental disorders and cerebral palsy
4. by mothers with one handicapped child to be assured of the normal development of the following child

The P r e c h t l -O p t i m a l-S c o r e (13) was the basis of the ranging in low-medium-high risk.

In the "low-risk" group, seen with 3 months of age, 13 came out to be normal without any neurological deviations. 10 children showed minimal, 5 medium and 2 showed severe involvement in motor behaviour.
With 6 years 19 children showed no deviations at all, 7 minimal and 4 medium deviations. No child was severly handicapped in motor behaviour.
In the "medium-risk" group 19 children came out to be normal, 22 showed minimal, 15 medium and 14 a severe neurological disorder.
With 6 years 46 of those children were normal, 13 mini-

maland 11 medium motor disorders. No child was severly involved.
In the "high-risk" group 9 children came out to be normal, 10 showed a minimal, 5 a medium and 10 a severe handicap in motor behaviour.
With 6 years 14 children came out to be normal, 15 were minimal, 2 medium and 2 severly handicapped in motor behaviour.

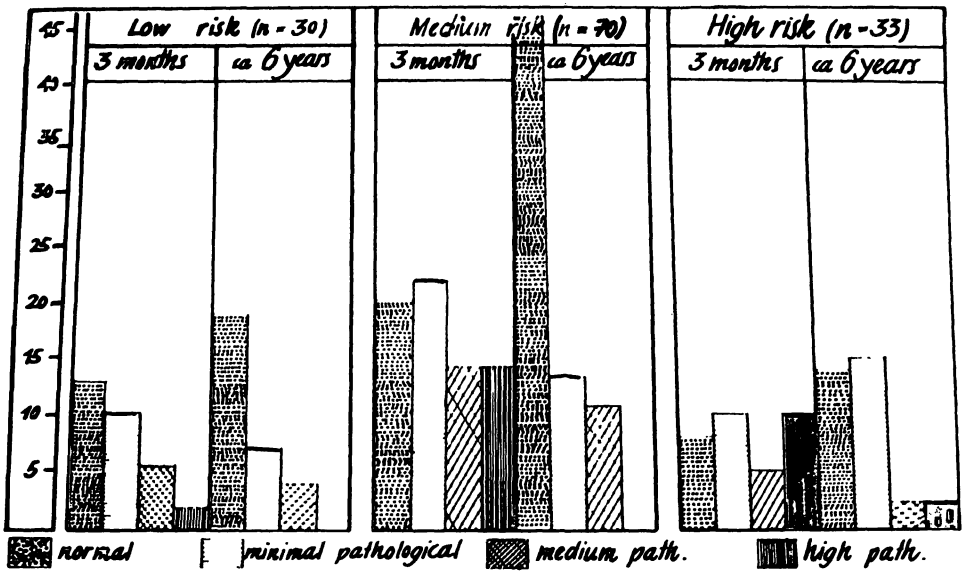

TABLE I

In the "low-risk" group 10 children needed no physiotherapy, 6 got general physiotherapy and 14 had neurodevelopmental treatment.
In the "medium-risk" group 21 children needed no treatment in physiotherapy, 6 had general physiotherapy, 43 were on neurodevelopmental treatment.
In the "high-risk" group 8 needed no treatment, 4 had general physiotherapy and 21 had neurodevelopmental treatment.
In the "low-risk" group 25 needed no treatment because of perceptual disorders, 5 had to be treated with a special treatment in perception (16.7 %).
In the "medium-risk" group 45 needed no special treatment, but 25 had to be treated in perception (35.7 %).
In the "high-risk" group 18 children needed no special treatment, but 15 children had to be treated with special treatment in perception (45.5 %).

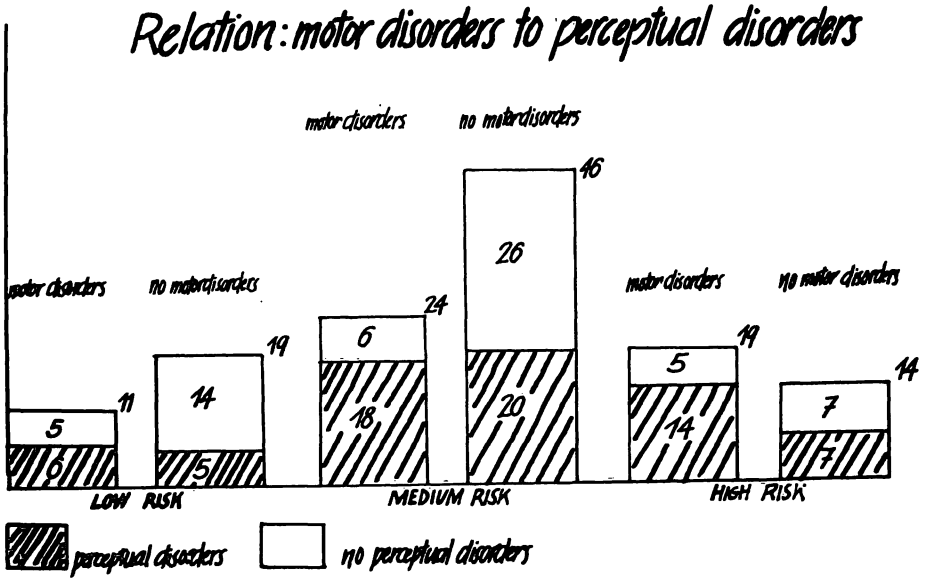

TABLE II

With 6 years it could be shown that there were in the "low-risk" group 11 children with motor disorders and 19 had no motor disorders. In the group with motor disorders 6 children had perceptual difficulties (54.5%). In 19 children with no motor disorders 5 showed perceptual disorders (26.3 %).
In the "medium-risk" group 24 children had a motor disorder. 18 of those children had perceptual disorders (75 %). 46 children in this group had no motor disorders, but 20 of them had perceptual disorders(43.5%).
In the "high-risk" group 19 children had a motor disorder and 14 of them had perceptual disorders (73.7 %). 14 children had no motor disorders, but showed anyhow in 7 children perceptual disorders (50 %).

The follow-up study of 133 children, seen approximately 10 times from the 3rd to the 78th months of life, had, even when treated with physiotherapy because of motor handicap or motor delay, perceptual disorders and need further treatment.
They show more or less disabilities with motor and/or perceptual and/or behavioural problems. Not only cerebral palsy, but also perceptual-motor disorders should be focused and is seen more and more.
These findings stands in contrast to decreasing perinatal causative factors.
Pre-, peri- and neonatal prevention is still a challenge.

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